

Claims

1. A system for cooling to a low temperature at least
5 one piece of equipment, particularly a piece of motor
vehicle equipment, comprising a circulation loop (4)
for heat-transfer fluid on which loop are mounted a
low-temperature heat exchanger (60) and at least an
equipment exchanger (102) comprising a heat-exchange
10 surface, characterized in that the heat-exchange
surface of the equipment exchanger (102) is split
between at least a first and a second heat-exchange
section (104, 106), the first heat-exchange section
(102) having a first flow rate (Q_1) of heat-transfer
15 fluid passing through it, the second heat-exchange
section (106) having a second flow rate (Q_2) of heat-
transfer fluid passing through it, the first flow rate
(Q_1) being greater than the second flow rate (Q_2).
- 20 2. The cooling system as claimed in claim 1,
characterized in that the low-temperature heat
exchanger (60) comprises at least a first and a second
outlet nozzle (78, 132, 141, 143) for the heat-transfer
fluid, the first nozzle being connected to the first
25 heat-exchange section (104), the second nozzle being
connected to the second heat-exchange section (106),
the heat-transfer fluid leaving the low-temperature
exchanger (60) via the first outlet nozzle being at a
temperature higher than that of the heat-transfer fluid
30 leaving the low-temperature heat exchanger via the
second outlet nozzle.
3. The cooling system as claimed in claim 2,
characterized in that the low-temperature heat
35 exchanger (60) comprises a multitude of fluid
circulation passes (86, 88, 90) through which the heat-
transfer fluid travels in succession, the first nozzle
being located upstream of the second nozzle with

respect to the circulation of the heat-transfer fluid through the passes (86, 88, 90).

4. The cooling system as claimed in one of claims 1 to 3, characterized in that the low-temperature circulation loop (4) comprises a circulation pump (58).

5. The cooling system as claimed in one of claims 1 to 3, characterized in that the low-temperature circulation loop (4) is mounted as a bypass between the inlet and outlet of the cooling circuit (2) of the motor vehicle combustion engine.

6. The cooling system as claimed in one of claims 1 to 5, characterized in that the equipment exchanger (102) is an intercooler.

7. The cooling system as claimed in one of claims 1 to 5, characterized in that the equipment exchanger (102) is a condenser forming part of the motor vehicle cabin air-conditioning circuit.

8. The cooling system as claimed in claim 7, characterized in that the condenser comprises a coolant-fluid condensation section (104) and a coolant-fluid supercooling section (106) and a reservoir (154) for filtering and dehydrating the coolant fluid, the condensation section constituting the first heat-exchange section (104) of the equipment exchanger, the supercooling section constituting the second heat-exchange section (106) of the equipment exchanger.

9. The cooling system as claimed in claim 8, characterized in that the reservoir (154) is inserted between the first heat-exchange section (104) and the second heat-exchange section (106).

10. The cooling system as claimed in claim 8, characterized in that the reservoir (154) is situated after the second heat-exchange section (106).